Journées d’étude

« Les doctorants et l’information scientifique »
3 et 4 juin 2010

3èmes journées d’étude du réseau national des URFIST
10èmes rencontres FORMIST

Campus de La Doua, Lyon Villeurbanne
PhD students, Information Literacy and Library User Education: International perspectives

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Les doctorants et l’information scientifique
10èmes rencontres FORMIST / 3ème journée d’étude des URFIST
Lyon, Villeurbanne
4 juin 2010
How can research libraries best support PhD students in their research process through IL education?
Outline

• Defining IL and user education for PhD students
  – The target group
  – The European educational framework: Expectations and qualifications

• The educational role of the library
  – User education programmes
  – Online user education
  – Information counselling: *Book-a-librarian service*

• Challenges

• Conclusions
The target group: Defining the PhD student

Who are they?

• Fundamental differences between IL for learning and IL for research (Booth, 2007)
  – What is their research process like?
  – What are their needs, including information needs?
  – What is their info seeking behaviour like?
    • How do they look for information?
    • How do they access, manage and use it?
    • Who do they turn to for help?
  – What competences, skills, knowledge and attitudes (IL) do they require for degree and career success?
• How does the transformation from student to scholar come about?
• How do they work?
• Where are they?
• Why are they doing a PhD?
• How do they feel?
What does the literature tell us?

• Less literature on IL and PhD students, compared to large number of studies on IL and undergraduates.

• A very heterogeneous group:
  – different requirements on PhD completion (dissertation, article collection)
  – different scholarly traditions and cultures
  – different phases in research life (novice PhD student vs. academic) (Booth, 2007)
  – home students / international students
  – private and professional life issues (contract staff, part-time vs. full-time)
  – Learning styles
  – ...
<table>
<thead>
<tr>
<th>Study</th>
<th>Discipline</th>
<th>Geographical area</th>
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<tbody>
<tr>
<td>Connaway &amp; Dickey (2010)</td>
<td>Multiple disciplines</td>
<td>US, UK</td>
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<td>Green &amp; Macauley (2007)</td>
<td>Multiple disciplines</td>
<td>US, Australia</td>
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<td>Haglund &amp; Olsson (2008)</td>
<td>Multiple disciplines</td>
<td>Sweden</td>
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<td>Harrington (2009)</td>
<td>Psychology</td>
<td>Canada</td>
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<td>Vezzosi (2008)</td>
<td>Biology</td>
<td>Italy</td>
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Some trends

- Significant cross-disciplinary variation in info search behaviour
- Increasing importance of e-journals
- General wish to have access to more digital content (all kinds and formats)
  ‘Pre-print archives even more important to physicists and astronomers than e-journals because the most important info “is often too recent to have been published”’ (Jamali & Nicholas, 2008)
- Speed and convenience of access are important factors
  - Convenience of desktop access to e-contents appreciated over the physical library:
    - library rarely visited - undergraduate ‘living room’ (Haglund & Olsson, 2008: 56)
  - ‘They do no bother to get a journal article if it is unavailable in electronic form’ (Haglund & Olsson, 2008: 56)
Some trends

- Google is a central resource
  - Often used to locate and access full text articles (50% students in George et al. (2006))
  - First choice (Haglund & Olsson, 2008; Jamali & Nicholas, 2008)

- Need for enhanced functionality of library resources
  Too complex compared to e.g. Google

- Confidence in own info searching skills and use of info discovery tools
  But students’ information literacy may not be good enough

- Little awareness of librarians’ expertise, available library resources and services (e.g. training)
Some trends

Contradictory findings on the value of formal training in electronic searching (Connaway & Dickey, 2010).

- Library and librarians peripheral to the research experience
- Students turn to peer students/colleagues and supervisors for help, not to librarians.
  ‘The idea of contacting the library for help does not occur to them’ (Haglund & Olsson, 2008: 55)
- No need for instruction (self-taught).
  Haglund & Olsson (2008), Harrington (2009), Fleming-May & Yuro (2009)

- Appreciation of IL education and librarians’ expertise.
  Vezzosi (2008), Connaway & Dickey (2010)
Recommendations for professional practice

- Identify the needs and behaviour of each specific target group.
- Provide more seamless access to a wider range of digital resources.
- Improve functionality of resources (more ‘Google-like’).
- Provide high-quality metadata to facilitate resource discovery.
- Advertise library brand, value and resources better within the community.
- Inappropriate to attempt to meet IL needs of PhD students using instruction methods based on undergraduate student behaviours (Booth, 2007):
  - Focus on info management rather than retrieval
  - Info retrieval instruction should focus on area scanning, footnote chasing, known author searching, rather than keyword searching.
- Integrate user education in existing research programmes and research groups.
- Provide individually tailored ’just in time’ education.
Project *Information Search Behaviour of PhD Students*

- **Aim:** To describe how PhD students search, access, manage and perceive different info. sources in their scholarly work.
  - Strategies to find literature
  - Use of technology
  - Types of sources and information
  - Emotional dimension
  - Library support

- **Phases:** Literature review, survey and interviews
- **Collaboration:** University Libraries of Copenhagen, Oslo and Vienna
- **2009-2010**
What is expected from the PhD student?

The European educational framework

• Qualifications framework for European Higher education area (“Dublin descriptors”)
• National Qualifications frameworks (e.g. Norwegian, French)

How can research libraries add value to the doctoral experience so that students acquire the expected qualifications?
Qualifications that signify completion of the third cycle are awarded to students who:

- Have demonstrated **a systematic understanding** of a field of study and **mastery of the skills and methods of research** associated with the field;

- Have demonstrated **the ability to conceive, design, implement and adapt** a substantial process of research associated with that field;

- Have **made a contribution through original research** that extends the frontier of knowledge **by developing a substantial body of work**, some of which merits national or international refereed publications;

- Are **capable of critical analysis, evaluation and synthesis** of new and complex ideas;

- **Can communicate** with the peers, the larger scholarly community and with society in general about their areas of expertise;

- Can be expected to **be able to promote**, within academic and professional context, **technological, social or cultural advancement** in knowledge based society.
What is expected from the PhD student?

The European educational framework

- **Doctoral studies in Europe: Excellence in researcher training** (League of European Research Universities, 2007).

**Transferable skills** as a key precept for the doctoral curriculum in order for universities to achieve excellence in doctoral training

Transferable skills. Doctoral candidates must be trained to develop strong transferable skills which will add to their employability and enhance the quality of their research project. Throughout the PhD programme training in general research methods, academic writing and communication skills, research grant proposal writing, teacher training, time and career management should be provided *(best practice examples 2 and 3)*. (p. 9)
What is the educational role of the library?
What is the educational role of the library?
What is the educational role of the library?

• Theories of learning and teaching underlying user education?
  – Learning as a process of meaning construction
  – Learning as a social phenomenon
  – Contextualised learning
  – Student-centred and process-oriented teaching

• Identifying library zones of intervention in the doctoral process – and non-zones of intervention! (Meho & Tibbo, 2003)

• Multiplicity of librarian roles: identifier, counsellor, etc (Kuhlthau, 2004)
IL education for PhD Students at Bergen University Library

General learning outcomes

Research Dissemination and Copyright Issues in Publishing (Lectures)
After the course, participants will
  – Have gained a deeper understanding of author’s rights
  – Have gained a deeper understanding of using others' work in research and publishing
  – Have knowledge about open access publishing and self-archiving
  – Have knowledge about research assessment through bibliometric methods.

Tracing Research Information (Workshops)
After the course, participants will
  – Have gained a deeper understanding of the structural characteristics of scholarly literature
  – Be familiar with and recognise differences between discipline-relevant databases and resources
  – Be able to conduct effective advanced searches by making use of database features
  – Be able to use methods to evaluate and manage search hits
  – Be able to use technology to keep updated (e.g. RSS feeds and other alerts)
  – Be able to manage references effectively and use them ethically in their work.
Examples of courses: University of Bergen Library

Publishing Issues and Information Use for Phd Students

• PhD-students, Faculty of Mathematics and Natural Sciences, University of Bergen
• Approx. 30 participants (autumn 2009)
• In English
• Optional (strongly recommended by the Faculty)
<table>
<thead>
<tr>
<th>Plenary sessions</th>
<th>Lesson</th>
<th>Time</th>
<th>Content</th>
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<tbody>
<tr>
<td>Part 1: Scholarly literature</td>
<td>Monday 16.nov 12:15 – 14:00</td>
<td>Structural characteristics of scholarly literature&lt;br&gt;Searching and retrieving scholarly literature&lt;br&gt;Choosing ‘high quality’ scholarly literature&lt;br&gt;Using scholarly literature in own works&lt;br&gt;Follow the development in a subject field</td>
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<td>Part 2: Citation statistics</td>
<td>Monday 23. nov 12:15 – 13:20</td>
<td>The journals’ impact factor, mean citation count and h-index. Examples from ISI WoS and Google Scholar&lt;br&gt;Publication points according to the Norwegian system</td>
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<td>Part 3: Publishing</td>
<td>Monday 23. nov 13:40 – 15:00</td>
<td>Copyright issues and publishing&lt;br&gt;Open Access publishing&lt;br&gt;Self-archiving and institutional repositories</td>
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<td>Lesson</td>
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<td><strong>Workshops</strong></td>
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<td>PubMed</td>
<td>Tuesday 17. nov 9:15 – 10:00</td>
<td>Database features and hands-on searching</td>
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<tr>
<td>CSA</td>
<td>Wednesday 18. nov 9:15 – 10:00</td>
<td>Database features and hands-on searching (ASFA, Georef, Entomology Abstracts, MGA)</td>
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<tr>
<td>ISI WoS and Google Scholar</td>
<td>Thursday 19. nov 9:15 – 11:00 or Wednesday 25. nov 9:15 – 11:00</td>
<td>Database features and hands-on searching (JCR, ISI WoS, Inspec, Zoological Records, Biosis Previews and Google Scholar)</td>
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<tr>
<td>Scifinder</td>
<td>Tuesday 24. nov 9:15 – 11:00</td>
<td>Database features and hands-on searching</td>
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<tr>
<td>CABI</td>
<td>Tuesday 24. nov 11:15 – 12:00</td>
<td>Database features and hands-on searching</td>
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<tr>
<td>MathSciNet and ACM Digital Library</td>
<td>Wednesday 25. nov 9:15 – 11:00</td>
<td>Database features and hands-on searching</td>
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## Publishing Issues and Information Use for PhD Students

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<tr>
<th>Workshops</th>
<th>EndNote Basic</th>
<th>Wednesday 18. nov 10:15 – 12:00 or Friday 20. nov 9:15 – 11:00</th>
<th>Managing references (beginners)</th>
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<td>- Entering references</td>
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<td>- Choosing styles</td>
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<td>- Creating bibliographies</td>
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<td>- Using references while writing (MS Word)</td>
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<td>EndNote Advanced</td>
<td>EndNote Basic</td>
<td>Thursday 26. nov 9:15 – 11:00 or Friday 27. nov 9:15 – 11:00</td>
<td>Managing references (advanced users)</td>
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<td>- Short repetition of main features</td>
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<td>- Adding full text to a reference</td>
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<td>- Creating a bibliography from multiple documents</td>
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<td>- Collaborating on an EN library</td>
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<td>- Creating own styles</td>
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Examples of courses: University of Bergen Library

• Searching, managing and using information in research work
  – PhD programme at Psychology Faculty
  – 7 hours (2 sessions on separate days)
  – Compulsory (embedded in a 2-week PhD course on research ethics, methodology and information literacy)
  – 21 students (April 2010)
  – In Norwegian

• Research Dissemination and Copyright Issues in Publishing and Tracing Research Information
  – Integrated in the University’s Bergen Summer Research School
  – International PhD students and researchers
  – 8 parallel workshops + lecture
  – 4 hour course
  – Approx. 70 participants
Examples of courses: Aalborg University Library, Denmark

Library courses for researchers and other employees

How can the library support your research?
- Library services
- Discipline specific database
- E-books and e-journals
- Alerts

Will your project application bear fruit?
- Discovering research areas
- Finding "state-of-the-art" articles
- Finding other researchers with relevant expertise

Is your research accessible?
- Research register
- Self archiving / Institutional repository

Do you have a publication strategy?
- What are "good places" to publish?
- How to make a publication count in the "Danish model"?
- Bibliometrics and citations

Introduction to RefWorks
Online user education

Project *Information Management for Knowledge Creation*

http://inma.b.uib.no/

- Develop online information literacy education modules for PhD students.
- Knowledge and research based development project: PhD students’ information searching behaviour and information needs
  - as documented in the literature
  - as revealed by the project own findings.
- *Open access* modules for integration in PhD programmes (online and face-to-face)
- In English
Online user education

Project *Information Management for Knowledge Creation*

• Collaboration between five nordic academic libraries
  – University of Bergen Library
  – Bergen University College Library
  – Norwegian School of Economics and Business Administration, Library
  – University of Oslo Library
  – University of Aalborg Library
• Funded by Norwegian Authority for Archives, Libraries and Museums
• 2010-2012
Project *Information Management for Knowledge Creation*

http://inma.b.uib.no/

Phase 1 – Mapping the territory
- Establish how PhD students develop their information literacy, what information needs they have and what information seeking behaviour they show.
- Assess to what extent existing library services meet PhD students’ research needs and support research process.
  - Literature review
  - Focus group interviews (PhD students, supervisors, librarians)
  - Document analysis

Phase 2 – Designing instructional modules
- Informed by findings in Phase 1
- Areas: advanced information searching, publication ethics, copyright, research publishing.

Phase 3 – Implementing and evaluating
Embedded in various PhD programmes and evaluated

Phase 4 – Communicating the results
Conference papers, publications, staff training initiatives and final report
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<th>Name</th>
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<td>E-mail</td>
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<td>Telephone no.</td>
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<tr>
<td>Student/Employee</td>
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<tr>
<td>Faculty</td>
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<tr>
<td>Education program/study</td>
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<tr>
<td>Outline of your project topic/scope of assignment</td>
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<tr>
<td>Possible subject terms/keywords</td>
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<tr>
<td>The following information resources have been checked out beforehand</td>
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Some challenges

- Reaching out to university management, research schools/faculties, supervisors and PhD students
  - Achieving real collaboration with stakeholders
  - Integrating IL courses in PhD programmes
  - Attendance
  - Catering for diversity (student profile, discipline differences, doctoral degree requirements)
  - Raising awareness
    - Of university and PhD students: Library support potential
    - Of library: Little experience of PhD process (Flemming-May & Yuro, 2009)
  - Defining boundaries: librarian’s vs. supervisor’s role
Some challenges

• Empowering the librarian: Need for continuous professional development
  – Pedagogical/didactic competence
  – English language competence - internationalisation at doctoral level
  – Keeping abreast of developments in scholarly communication and information technology
Tackling the challenges

• Need for libraries to be more proactive
  (e.g. Booth, 2007; Haglund & Olsson, 2008; Harrington, 2009)
Tackling the challenges

Establish proactive physical and virtual presence at the departments/research schools throughout the research experience

For example

• Chat service to provide point-of-need assistance
• Online tutorials for PhD students
• Tailored face-to-face workshops, embedded in research events or professional development initiatives for students
• Orientation sessions for new students and staff
• Strategy to target supervisors
  – to discuss shared responsibility for PhD students’ enhancement of IL
  – to ensure they can recommend services to students

(Booth, 2007; Haglund & Olsson, 2008; Harrington, 2009)
How can research libraries best support PhD students in their research process through IL education?
Summing up

The design and roll out of effective information literacy education for PhD students is informed by

- Knowledge of the target group and the doctoral process
- Establishing skills, knowledge and attitudes required for degree and career success.
  - Literature reviews
  - Document analysis (educational framework)
  - Research & development projects (surveys, interviews, etc)
- Reflecting on the educational role of the library
  Educational theories on learning and teaching
- Identifying and tackling the challenges
Merci beaucoup!
Creating Knowledge VI
08–10 September 2010 / Bergen, Norway

Information Literacy and Diversity in Higher Education: Mapping the Learning Environment

ck-vi.uib.no
References


